



Procedure Information Sheet

Introduction

This is a major operation to decompress the spinal cord or nerve roots. Fusion may be done at the same time if there are pre-existing spinal instability, deformity or destabilization after decompression. Internal fixation device may be used to provide immediate spinal stability and enhance fusion.

Indication

- Degenerative diseases with significant functional or neurological deficit e.g. spinal stenosis, degenerative spondylolisthesis.
- Miscellaneous conditions causing spinal cord compression e.g. ossification of posterior longitudinal ligament or yellow ligament, spinal infection.
- Spine fracture, dislocation or a combination of them.
- Neoplastic diseases e.g. spinal metastasis causing spinal cord compression in patients with reasonable life expectancy.
- Spinal deformity due to a wide range of pathologies.
- Inflammatory diseases leading to severe spinal instability or spinal cord compression.

The Operation / Procedure

1. The operation is usually done under general anesthesia.
2. The surgery is usually done through a posterior midline longitudinal incision.
3. After mobilization of the paraspinal muscles, the posterior aspect of the vertebrae are exposed.
4. Spinal cord or nerve decompression is achieved by either laminotomy, laminectomy or foraminotomy.
5. If doctor intend to do spinal fusion, they need to lay down bone graft on the spine. Autogeneous bone graft or allograft may be used.
6. Variation of techniques occurs with different kinds instrumentation systems. Screws and rods are the commonest instrumentation system nowadays, but hooks, cables or wires may be used. Most internal fixation devices are made of titanium and they are MRI compatible.

Before the Operation / Procedure

1. A written consent is required.
2. Optimization of pre-existing medical conditions, e.g. heart disease, hypertension, diabetes mellitus, anaemia, asthma, etc.
3. Measurement of external supportive device for spine immobilization after surgery e.g. neck collar, thoracolumbosacral orthosis.
4. Blood tests and X-rays of the appropriate regions before operation.
5. Skin preparation or shaving as needed.
6. Fasting for at least 6 hours before operation.

After the Operation / Procedure

1. Usually diet is not allowed on the day after surgery. Intravenous fluid replacement may be necessary.
2. Analgesics will be prescribed for better pain control and facilitates rehabilitation.
3. Passing stool and urine will be arranged in bed in the lying position.
Pre-operative practice is beneficial. Sometimes a urinary catheter is used for monitoring and convenience. Usually it will be removed in a few days.
4. Lower limb exercise is encouraged to reduce the risk of deep vein thrombosis.
5. Cough and breathing exercise reduces respiratory complication.
6. Turning of body is usually allowed within few days after surgery and this will not affect wound healing.
7. Sit out with corset and walking exercise will be started according to the progress.
8. Drain(s) for removal of fluid might be inserted depending on necessity.
9. Keep the wound clean and dry.
10. On average, most posterior spinal wounds heal in two weeks for normal subjects. Long healing time occurs if patients have risk factors such as diabetes, deranged renal function or wound infection.
11. If any excessive bleeding, collapse, severe pain or signs of infection at wound site such as redness, swelling or fever, consult doctor immediately.

Patient's Label

Patient Name: _____

Hospital No: _____

Episode No: _____



Risk and Complication

1. General risks

- 1.1 Excessive bleeding or cardiovascular accident causing shock, stroke, heart attack or derangement of liver function, etc., which may in turn lead to death.
- 1.2 Ask the anaesthetist for details of anaesthetic complications.

2. Risks Specific to this Operation

- 2.1 Postoperative wound infection.
- 2.2 Neurological deterioration. The most serious neurological complication is complete tetraplegia, paraplegia or cauda equine syndrome depending on the location of the operation. Patients may lose the ability to breathe if the complication occurs in the upper cervical spine. The motor, sensory, autonomic, urinary, bowel and sexual function may be affected.
- 2.3 Excessive bleeding leading to shock or even death. Massive transfusion is also associated with complications.
- 2.4 Dural tear with or without persistent leakage of cerebrospinal fluid.
- 2.5 Postoperative hematoma formation requiring drainage.
- 2.6 Delay wound healing.
- 2.7 Prominence or Malposition of the internal fixation device.
- 2.8 Delayed spinal fusion or nonunion. This may lead to the loosening of the internal fixation device.
- 2.9 Hypertrophic scar.
- 2.10 If autogenous bone grafting is necessary, donor site may have prolonged or persistent pain, infection or hematoma formation.
- 2.11 Spinal decompression alone may lead to subsequent spinal instability.

Disclaimer

This leaflet only provides general information pertaining to this operation / procedure. While common risks and complications are described, the list is not exhaustive, and the degree of risk could also vary between patients. Please contact your doctor for detailed information and specific enquiry.

Reference

Smart Patient Website of Hospital Authority, Procedure Information Sheet:
Posterior Decompression and/or Spine Fusion (04/2021)

Patient's Label
Patient Name: _____
Hospital No: _____
Episode No: _____

Patient's Signature: _____ Date: _____